# "ELECTRIC HOUSEHOLD APPLIANCE FOR STEAM COOKING"

The present invention is about an electric household appliance for food steam cooking, suitable in particular but not exclusively for preparing the so called scrambled eggs, which is of simple and economic manufacture, its components in contact with the food can be easily removed and accurately cleaned, and it is portable, thus being possible its use in any room in which there is an electric socket.

The necessities of modern life require specialized electric household appliances which allow to prepare the food in a hygienic and quick way, especially at breakfast, when the available time is little and valuable. This necessity is particularly felt for anyone who is accustomed to the so called American breakfast, in which it is required to contemporarily prepare in the shortest time hot beverages and solid food, possibly without activating the stoves, which require to subsequently perform the cleaning of the kitchen and the used utensils.

Therefore, several electric household appliances have been provided, like toasters, teapots, coffee machines, boilers and similar devices. A kind of food particularly appreciated by many people in the morning is the scrambled eggs, which actually have to be prepared in a pan on the stove, or by means of electric household appliances which however require a continuous interaction between the user and the electric household appliance during the eggs cooking and mixing phase.

The electric household appliance according to the present invention now solves these problems, allowing to steam the food, in particular scrambled eggs, in a quick, easy and hygienic way, without needing to use the kitchen stoves, and also in a healthy way, without requiring butter or oil.

Furthermore, the electric household appliance according to the present invention allows to optimize the use of steam with respect to similar devices of the prior art, allowing to operate with greater safety and enabling the user to obtain the exact indication about reaching the proper cooking degree by the food placed inside the appliance.

Objects, characteristics and advantages of the appliance in question will be clear and evident from the following detailed description, with reference to the annexed figures of illustrative drawings, wherein:

Figure 1 is a sectional view of the appliance, in opened position;

Figure 2 shows a detail of a component of the appliance;

Figure 3 is a sectional view of the appliance assembled and ready to be used, and it shows a detail of the steam relief valve; and

Figure 4 is a top view of the appliance assembled and ready to be used.

Referring to the aforesaid figures of the annexed drawings, the appliance according to the present invention comprises an annular basement 10, in which an on/off switch 12, a pilot light 30, a feeding cable (not shown in the drawings) for the current input and the connection to the resistor (not shown too) contained in the appliance's body are provided.

The appliance's body is disposed in the basement 10, said body consisting of two components 14, 16, one engageable with the other for instance by a couple of screwing turns 17. The lower component 14 forms the water tank and comprises the resistor 18, embedded in said component's bottom 15, for heating the water, and the thermostat 19 applied below it. The upper component 16 forms a bearing surface, inside which the conduit 20 for the steam passage, the valve 21 which allows or prevents the passage of the steam in the conduit 23 and the piston pin 22 for controlling the valve 21 are arranged. In the upper component 16 a cap 37 is furthermore present, able to allow the loading of the water inside the tank 14 and normally provided with a safety valve. An arm 31, comprising a conduit 32 matching the conduit 23, is hinged to the body 16 by a torsion spring 29, said arm 31 furthermore comprising a turbine 24 splined on a shaft 34. The arm 31 ends with a handling knob 26, made of wood or of other thermal insulating material. In the upper portion of the arm 31, over the turbine 24, a disc 38 made of transparent material, like glass or the like, is placed, allowing the user to control the actual rotation of the turbine 24 during the appliance working.

The appliance according to the present invention further comprises a pan-shaped container 42, provided with a handle 43 made of thermal insulating material, in which the food to be cooked is placed, and a lid 36, provided with seal gaskets 28 and one or more slits 27 for the steam outlet, suitable for being coupled with said container 42. Said lid 36 is engageable under the arm 31, for instance by fitting or by screwing turns, and it comprises a pin 35 able to be inserted in the shaft 34, to transfer the motion of said shaft 34 to a mixing rod 25 ending with a device consisting of rotating blades 45, and a conduit 33, forming a continuation of the conduit 32 obtained in the arm 31, which allows the diffusion of the steam inside the container

42, where the food to be cooked is placed.

To enable the working of the appliance, once disposed the eggs or other food to be cooked inside the container 42, the user acts on the handling knob 26, in order to bring together the lid 36 and the container 42 for granting the seal. With this movement, the piston pin 22, acting on the spring of the valve 21, opens said valve 21, allowing the steam generated in the lower component 14 of the appliance and conveyed in the conduit 20 to pass in the subsequent conduit 23 and thus in the conduits 32 and 33, said steam reaching at last the container 42, where it will be used for cooking the food. The user maintains pressed the lid 36 on the container 42 for all the cooking time. Advantageously, the steam under pressure furthermore produces the movement of the turbine 24, and consequently of the bladed device 45, which allows the automatic mixing of the food during its cooking phase. Once the eggs or the food placed inside the container 42 are cooked, because of the greater friction, due for instance to the eggs solidification, encountered by the bladed device during its rotating movement, or when the vapor pressure exceeds a predetermined limit value, the stopping of the turbine 24 occurs. The user, seeing through the transparent disc 38 said stopping of the turbine 24, releases the handling knob 26: the arm 31 thus returns to its vertical position, pushed by the torsion spring 29, while the piston pin 22, returning to its rest position, causes the closure of the valve 21 and consequently blocks the access of the vapor in the conduit 23.

From performed tests it was noticed that the food is properly cooked in a surprisingly short time, thus obtaining also a saving of time and electric energy.

The appliance according to the present invention could be made of the most suitable metallic and/or plastic materials, according to the function of its different components, while the handling knob 26 of the element 31 and/or the handle 43 of the container 42 could be made of wood or other thermal insulating material. The interior of the container 42 will be preferably coated with anti-adherent material.

It is therefore evident that the appliance fully achieves the intended objects, but alterations, additions and/or replacements of elements could be made without falling outside the scope of protection of the invention, as it is also defined in the appended claims. For example, the position of the valves for supplying and discharging the steam, the housing system of the container in the upper component of the body and/or the joining system of the two components of the body could be different from that shown in the drawings.